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R-585-4-4-31
PRELIMINARY ASSESSMENT OF
ALLIED CHEMICAL CO. - HOPEWELL PLANT
PREPARED UNDER

TDD NO. F3-8402-21
EPA NO. VA-40
CONTRACT NO. 68-01-6699

FOR THE
HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

JULY 16, 1984

NUS CORPORATION
SUPERFUND DIVISION



SUBMITTED BY

REVIEWED BY

APPROVED BY

[REDACTED]

[REDACTED]

[REDACTED]

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SECTION 1

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1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-6699. This specific report was prepared in accordance with Technical Directive Document No. F3-8402-21 for the Allied Chemical Company, Hopewell Plant, located in Hopewell, Virginia.

1.2 Scope of Work

NUS FIT III was tasked to conduct a high priority preliminary assessment at the Allied Chemical Company, Hopewell Plant. Background information pertaining to the site was obtained through the coordination with the Virginia State Health Department. The site visit was made on March 19, 1984.

1.3 Summary

The Allied Chemical Company, Hopewell Plant is a 500 acre facility which has been in operation since 1928. NUS FIT III conducted a preliminary assessment of several past disposal areas located on the facility. The on-site inspection was conducted with representatives of the Virginia State Health Department. Areas investigated during the assessment included a dredge spoil disposal area, closed phenol residue ponds filled in with rocks and soil, an area of ponded water, fly ash field used as a settling area for decontamination and an old alum mud lagoon. According to Allied Chemical Company officials, the activities surrounding the dredge spoil area, fly ash field and phenol residue ponds have been noted in the Hopewell Plant's Eckardt, RCRA and CERCLA notifications. The past use and subsequent closure of these areas have reportedly been closely monitored and supervised by federal and state agencies within statutory guidelines.

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SECTION 2

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2.0 THE SITE

2.1 Location

The Allied Chemical Company, Hopewell Plant, is located on State Route 10 in Hopewell, Virginia.

2.2 Site Layout

The Allied site consists of 500 acres and is situated in an industrialized section of Hopewell along the James River. The plant contains numerous office and manufacturing buildings. The disposal areas are scattered throughout the plant. The Alum Plant is located on the south side of Route 10, which borders the Hopewell facility.

2.3 Ownership History

The Allied Chemical Company has been the owner and operator of the Hopewell facility since its inception in 1928.

2.4 Site Use History

The dredge spoil area, located adjacent to the James River near the Hopewell Plant's pier, was used in 1973 to dispose of approximately 30,000 cubic yards of contaminated river sediment. According to representatives of the Hopewell Plant, the sediment was dredged from an area near the pier and was analysed by Allied Chemical Company in 1976. The analyses revealed that the sediment was contaminated with 0.8 ppm kepone. The dredge spoil area is approximately 1 to 2 acres in size and was used under a Corps of Engineers permit. The area was capped with 6 inches of clay and seeded after the depositing of dredge spoils was completed. The area was noted in the CERCLA Section 103(c) report filed with the EPA in 1981.

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From the mid 1950s until about 1968 the Allied Chemical Company, Hopewell Plant, used 3 evaporation ponds for phenol residue waste. These ponds are located off Route 10, approximately 3,000 feet southeast of the main gate of the plant. According to Mr. Evans Drake, Supervisor of Environmental Control at the Hopewell Plant, the pond liquid was pumped to the Hopewell Regional Water Treatment facility for treatment. The remaining solid material, approximately 88,000 cubic feet of residual dirt, was left in place with the approval of the VA State Water Control Board (VASWCB). The ponds were reportedly about 8 feet deep and filled with rocks and soil.

A fly ash field, located south of the Hopewell facility near the Allied Alum Plant, was used in 1978 as a settling area for activated carbon treated water generated during decontamination of the Semi Works Plant, a kepone processing plant. The water was transported by a network of hoses, which are to be removed in the immediate future. According to Mr. Evans Drake of Allied Chemical, this area was selected by the Kepone Task Force and approved by the EPA, the Virginia Department of Health, and the Virginia State Water Control Board.

A preliminary assessment submitted by Ecology and Environment, Inc. on July 16, 1982, indicated that the demolished kepone plant and all contaminated process equipment was placed in a clay-sealed cell, which is monitored on a bimonthly basis by Allied Chemical Company.

2.5 Permit and Regulatory Action History

According to Mr. Evans Drake of the Allied Chemical Company, the dredge spoil area was used in 1973 under Corps of Engineers Permit No. 2SDOXZ1000985 which was issued on November 7, 1972. Allied Chemical Company dredges the river every 8 to 4 years to keep the shipping channel open and prevent any unnecessary silt build up.

Other permits issued to the facility include State Health Department Permit No. 241 for the construction of the kepone disposal cell and a Privately Owned Treatment Works Plant Permit in 1978 for the treatment of the residue pond liquid.

Regulatory action at the facility included the termination and demolition of the Semi Works Plant, a kepone processing plant, that was ordered closed in 1977 by the Environmental Protection Agency, the Virginia State Water Control Board and the Virginia State Health Department. As part of the consent decree, Allied constructed a clay lined cell which was used to disposed of the demolished plant.

2.6 Remedial Action To Date

Remedial action at the facility included the demolition of the Semi Works Plant, a kepon processing plant which ceased to be active in 1977. A clay-sealed cell was constructed for the disposal of the demolished building and contaminated material.

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SECTION 3

3.0 ENVIRONMENTAL SETTING

3.1 Surface Waters

The James River and the Appomattox River merge approximately 1 mile northwest of the facility, and the James River continues to flow southeasterly past the site. The Appomattox River is used as a drinking water source with the intake located about 2 miles upstream of the site. Both the James and Appomattox Rivers are used for industrial and recreational purposes, including fishing, boating, and possibly swimming. Fish types that can be caught in these rivers include pan fish, striped bass, and catfish. Both rivers are affected by tidal influence.

Gravelly Run flows through the plant. The headwaters for Gravelly Run consist of surface runoff and NPDES-permitted 001 and 002 discharges. The creek flows into the James River, and it is not used as a potable water source nor is it reportedly used for any industrial or recreational purposes.

Bailey Creek is located southeast of the plant and flows into the James River, downstream of the facility. According to the U.S.G.S. 7.5 Minute Flood Prone Map of Hopewell, this section of the creek is a flood prone area and is affected by tidal influence. The creek is expected to have some industrial and recreational uses, but is not used as a potable water supply. This creek is adjacent to the City of Hopewell Landfill and was also dredged and scraped after the kepone incident involving LIFE SCIENCES and Allied. Two kepone burial sites exist on city property near the mouth of Bailey Creek.

3.2 Geology and Soils

According to the Geologic Map of Virginia (dated 1963), the facility is underlain by the Nanjamoy Formation which consists of argillaceous and glauconitic sand. The depth to bedrock in the area is reported as greater than 60 inches. The General Soil Map of Virginia (dated 1979) reports the soil types that exist in the area of the site are of the Pamunkey-Tetotum-Fluvaquents Association. These are deep to very deep, nearly level to sloping soils formed in unconsolidated sediments of the Coastal Plain and river terraces. The permeability of these soils is moderate ranging from 10^{-2} to 10^{-4} centimeters per second.

3.3 Groundwaters

Available information indicates that depth to groundwater in the area ranges between 2 and 5 feet. Shallow groundwater flow is unknown but expected to be north-northeast towards the James River. Ten monitoring wells, with depths ranging from 28.5 feet to 50.0 feet, exist on the plant's property. Groundwater is not used as a potable source for the city of Hopewell, which obtains its water from the Appomattox River. Some private groundwater wells reportedly exist on the south side of Bailey Creek, about 8 miles from the facility.

3.4 Climate and Meteorology

According to the Climatology of the United States (No. 60, Climate of Virginia), the city of Hopewell has a daily average maximum temperature of 71.3°F and an average minimum temperature of 48.6°F. The normal annual total precipitation for this area is 48 inches, and the mean annual lake evaporation is 40 inches. The net annual precipitation for this area is 8 inches.

3.5 Land Use

The area surrounding the Allied Hopewell Plant is zoned industrial. The James River is located immediately adjacent to the northeast section of the facility. Residential areas exist about 2 miles north, west and south of the site.

3.6 Population Distribution

The residential areas of Hopewell are located about 2 miles north, west, and south of the facility and account for a population exceeding 10,000 residents. Few homes exist in the industrial area immediately surrounding the plant.

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3.7 Water Supply

The Virginia American Water Supply, located in Hopewell, provides water service to the City of Hopewell and parts of Prince George County. The source of this water is an intake on the Appomattox River, approximately 1 mile upstream of its confluence with the James River. This intake is located about 2 miles north (upstream) of the plant location. Process water and potable water for the Allied facility is also provided by the Virginia American Water Supply Company. According to a representative of the water company, some private wells exist south of the site on the opposite side of Bailey Creek.

3.8 Critical Environments

Eppes Island, Curles Neck Creek and Presquile National Wildlife Area are located within 3 miles of the Allied Hopewell Plant. These wetlands and wooded swamps are situated on the James River upstream of the facility, and provide food and cover for various water fowl populations.

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SECTION 4

4.0 WASTE TYPES AND QUANTITIES

According to Mr. Evans Drake, Supervisor of Environmental Control for Allied, approximately 30,000 cubic yards of river sediment dredging was deposited in a 1 to 2 acre field located along the James River. The sediment was contaminated with 0.8 ppm kepone and was obtained from a portion of the James River, adjacent to the Allied plant.

Approximately 88,000 cubic feet of residual dirt was left in place at the old phenol residue ponds located off Route 10, southeast of the main gate. The pond liquid was pumped to the Hopewell Regional Water Treatment Facility in 1978 for treatment. The ponds were back filled with about 8 feet of rocks and soil.

The fly ash field, located near the Allied Alum Plant, was used in 1978 as a settling area for activated carbon treated water generated during the decontamination of the Semi Works Plant (kepone manufacturing). The amount of water pumped to this field is unknown.

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SECTION 5

5.0 FIELD TRIP REPORT

5.1 Summary

NUS FIT III representative Eugene Dennis visited the Allied Chemical Company, Hopewell Plant, on March 12, 1984. The purpose of this visit was to conduct a preliminary assessment of several inactive disposal areas located on the plant's property. Virginia Health Department representatives, Robert Wishser and Kevin Green, were also present during the on-site inspection. Weather conditions during the visit were clear and sunny, with temperatures ranging between 35° and 40°F.

Permission to access the plant's property was granted by Mr. Evans Drake, Supervisor of Environmental Control at Allied, via a telephone conversation with Eugene Dennis on March 5, 1984. Mr. Drake and other Allied representatives accompanied the Virginia Health Department and FIT III personnel during the visit.

5.2 Persons Contacted

5.2.1 Prior to Field Trip

L. Evans Drake
Supervisor, Environmental Control
Allied Fibers and Plastic
P.O. Box 761
Hopewell, VA 23860
804-541-5732

Robert Wishser
Virginia State Health Department
Bureau of Solid Waste Management
Richmond, VA 23219
804-225-2835

5.2.2 At The Site

L. Evans Drake, Supervisor
Environmental Control
Allied Fibers and Plastic
P.O. Box 761
Hopewell, VA 23860
804-541-5732

Robert Wishser
Virginia State Health Department
Bureau of Solid Waste Management
Richmond, VA 23219
804-225-2835

K. W. Tomko, Environmental Engineer
Environmental Control
Allied Fibers and Plastic
P.O. Box 761
Hopewell, VA 23860
804-541-5732

Kevin Green
Virginia State Health Department
Bureau of Solid Waste Management
Richmond, VA 23219
804-225-2835

Raymond Gaillard, Manager
Environmental Control
Allied Fibers and Plastic
P.O. Box 761
Hopewell, VA 23860
804-541-5732

5.3 Site Observations

- o The dredge spoil area, located along the northern portion of the facility, was observed to be about 1 to 2 acres in size and completely grassed over. The area is bordered by the James River. Leachate was not observed on or leaving the site.
- o The old phenol residue ponds were filled in with rocks and soil and partially weeded over. The defined boundaries of these ponds could not be determined. The exact depth of the ponds and the amount of fill material deposited are unknown; however, it was reported that the ponds were originally about 8 feet deep. Leachate and ponded water were not observed in this area. These ponds are located off Route 10, southeast of the main gate. Wooded areas were observed to the east, north, and west of these ponds.
- o Two areas of ponded water were observed near the kepone landfill cell. These ponds were separated by a small access road off Route 10. The water in one pond was dark brown in color and about 2 to 8 feet deep. This pond is at the base of a small ravine adjacent to an old debris and rubble disposal area. This area is presently being filled. The water in the pond is primarily from precipitation, but a spring reportedly exists above the pond and may flow into the pond, as indicated by a drainage pattern in the ravine. When the water level in the pond rises, it discharges to Gravelly Run via a small cement culvert. Water was not observed entering or leaving the pond during the site visit.

The pond on the opposite side of the road was larger, with water depths ranging between 3 and 5 feet. Trees and other vegetation were observed growing in this pond, and the water was relatively clear. According to Allied officials, this pond contains snakes and frogs during the warmer months. The source of water for this pond is precipitation, and the water level drops during dry weather. This pond is connected to Gravelly Run by a cement culvert.

- o An old inactive alum mud lagoon was observed on Allied's Alum Plant property, located south of Route 10 off the Hopewell Plant property. The water in the lagoon was bluish-green in color, and its depth could not be determined. Water was not observed entering or leaving the lagoon which was surrounded by a white powdery material. According to Allied officials, the source of water in the lagoon is precipitation.

- o The fly ash field, located behind the alum lagoon, was observed to be greater than 20 acres in size and was partially weeded over. Fly ash covered the surface of this area. Several large areas of ponded water were also observed. This field was reportedly used as a settling area for activated carbon treated water generated during the decontamination of the Semi Works Plant. A network of hoses, used to transport the water, was observed on the landfill's surface. Allied officials stated that these hoses would be removed in the near future.

PHOTOGRAPHIC LOG 5.4



Photos 1-2 - Panoramic view of
dredge spoil disposal area. Photo
looking northeast.

Allied Chem. Co. Hopewell, VA. Plant
 F3-8400-01
 VA-40
 3-10-84

Allied Chem. Co. Hopewell, VA. Plant
 F3-8400-01
 VA-40
 3-10-84

(#1)

Panoramic view of dredge
 Area. Photo looking north

Panoramic view of dredge spoil disposal
 Area. Photo looking north-east.

Eugene Dennis
 Eugene Dennis

Eugene
 Eugene

Photos 1-2 - Panoramic view of
 dredge spoil disposal area. Photo
 looking northeast.



— Photo 3-4 - Panoramic view of former
— location of plenol residue ponds. —
— Photo looking east. —

Allied Chem. Co. Hopewell, VA. Plant
F3-8402-01
VA-40
3-12-84

PANORAMIC view of
of plant residue ponds
EAST.

Allied Chem. Co. Hopewell, VA. Plant
F3-8402-01
VA-40
3-12-84

(73)

PANORAMIC view of former location of
plant residue ponds. Photo looking EAST.

Eugene Dennis
Eugene Dennis

Photo 3-4 - Panoramic view of former
location of plant residue ponds.
Photo looking east.



— Photo 5 - Poned water area on east —
 — side of access road. Photo looking —
 — east. —
 — ORIGINAL (Red) —



— Photo 6 - Debris and rubble disposal —
 — area near ponded water. Photo looking —
 — south. —

Allied Chem. Co. Hopewell, VA. Plant

F3-8402-21

VA-40

3-12-84

(45)

Ponded WATER Area ON EAST side of
Access ROAD. Photo looking EAST.

PR 1984

Eugene Dennis
Eugene Dennis

Photo 5 - Ponded water area on east
side of access road. Photo looking
east.

Allied Chem. Co. Hopewell, VA. Plant

F3-8402-21

VA-40

3-12-84

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Debris and Rubble disposal Area near
Ponded water. Photo looking South.

Eugene Dennis
Eugene Dennis

Photo 6 - Debris and rubble disposal
area near ponded water. Photo looking
south.



— Photo 7 - Ponded water on west side —
— of access road. Photo looking south. —
— ORIGINAL (Red) —

Allied Chem. Co. Hopewell, VA. Plant

(#7)

F3-8402-21

VA-40

3-12-84

Ponded water on west side of Access
ROAD. Photo looking south.

Eugene Dennis
Eugene Dennis

Photo 7 - Ponded water on west side
of access road. Photo looking south.



Photo 8-9 - Panoramic view of old
alum mud lagoon, Allied Alum Plant.
Photo looking northeast.

Allied Chem. Co. Hopewell, VA. Plant

F3-8402-21

VA-40

3-12-84

PANORAMIC view of old
lagoon, Allied Alum Plant
Northeast.

(#49)
Allied Chem. Co. Hopewell, VA. Plant.

F3-8402-21

VA-40

3-12-84

PANORAMIC view of old Alum mud
lagoon, Allied Alum Plant. Photo looking
north east.

Eugene Dennis
Eugene Dennis

Photo 8-9 - Panoramic view of old
Alum mud lagoon, Allied Alum Plant.
Photo looking northeast.



Photo 10-12 - Panoramic view of fly-
ash field located behind alum mud
lagoon. Photo looking south.

Allied Chem. Co. Hopewell, VA. Plant
F3-8402-21
VA-40
3-12-84

Panoramic view of fly
behind Alum mud lagoon
South.

Allied Chem. Co. Hopewell, VA. Plant
F3-8402-21
VA-40
3-12-84

Panoramic view of fly
behind Alum mud lagoon
South

Allied Chem. Co. Hopewell, VA. Plant
F3-8402-21
VA-40
3-12-84

Panoramic view of Fly Ash field located
behind Alum mud lagoon. Photo looking
South.

Eugene Dennis
Eugene Dennis

Photo 10-12 - Panoramic view of fly-
ash field located behind alum mud
lagoon. Photo looking south.



Photo 13-14 - Ponded water area on
flyash field. Photo looking south-
west.

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Allied Chem. Co. Hopewell, VA. Plant
F3-8402-21
VA-40
3-12-84

Ponded water area on fly
photo looking southwest.

Eugene
Eugene

Allied Chem. Co. Hopewell, VA. Plant
F3-8402-21
VA-40
3-12-84

(#13)

Ponded water area on flyash field
photo looking southwest.

Eugene Dennis
Eugene Dennis

Photo 13-14 - Ponded water area on
flyash field. Photo looking south-
west.



— Photo 15 - Photo of ~~ORANGE~~ valve and hosing —
— network used to transport decontamina —
— tion water to flyash field. —

Allied Chem. Co. Hopewell, VA. Plant

E3-8407-21

VA-40

3-12-84

(#16)

Photo of valve and piping network
used to transport decontamination
water to flyash field.

Eugene Dennis
Eugene Dennis

Photo 15 - Photo of valve and piping
network used to transport decontamin-
ation water to flyash field.



**POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT**

ORIGINAL
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REGION

SITE NUMBER (to be assigned by HQ)

III

VA-40

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME Allied Chemical Company		B. STREET (or other identifier) P.O. Box 761	
C. CITY Hopewell	D. STATE VA	E. ZIP CODE 23860	F. COUNTY NAME Prince George
G. OWNER/OPERATOR (if known) 1. NAME L. Evans Drake - Supervisor, Environmental Control		2. TELEPHONE NUMBER (804) 320-2085	
H. TYPE OF OWNERSHIP <input type="checkbox"/> 1. FEDERAL <input type="checkbox"/> 2. STATE <input type="checkbox"/> 3. COUNTY <input type="checkbox"/> 4. MUNICIPAL <input checked="" type="checkbox"/> 5. PRIVATE <input type="checkbox"/> 6. UNKNOWN			

I. SITE DESCRIPTION Filled in lagoons, spoil disposal field, old alum mud lagoon and fly ash field used as a settling area for decontamination water.	
J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.) Congressman Eckhardt Report	K. DATE IDENTIFIED (mo., day, & yr.) 11/1/79
L. PRINCIPAL STATE CONTACT 1. NAME Robert Wishser, Virginia State Health Department	
2. TELEPHONE NUMBER (804) 786-6322	

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM <input type="checkbox"/> 1. HIGH <input type="checkbox"/> 2. MEDIUM <input type="checkbox"/> 3. LOW <input type="checkbox"/> 4. NONE <input checked="" type="checkbox"/> 5. UNKNOWN	
B. RECOMMENDATION <input type="checkbox"/> 1. NO ACTION NEEDED (no hazard) <input type="checkbox"/> 2. IMMEDIATE SITE INSPECTION NEEDED a. TENTATIVELY SCHEDULED FOR: b. WILL BE PERFORMED BY: <input type="checkbox"/> 3. SITE INSPECTION NEEDED a. TENTATIVELY SCHEDULED FOR: b. WILL BE PERFORMED BY: <input checked="" type="checkbox"/> 4. SITE INSPECTION NEEDED (low priority)	

C. PREPARER INFORMATION 1. NAME Eugene Dennis		
2. TELEPHONE NUMBER (215) 687-9510	3. DATE (mo., day, & yr.) 4/19/84	

III. SITE INFORMATION

A. SITE STATUS <input type="checkbox"/> 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.) <input checked="" type="checkbox"/> 2. INACTIVE (Those sites which no longer receive wastes.) <input type="checkbox"/> 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)		
B. IS GENERATOR ON SITE? <input type="checkbox"/> 1. NO <input checked="" type="checkbox"/> 2. YES (specify generator's four-digit SIC Code): 2818		
C. AREA OF SITE (in acres) Total facility acres equal approx. 500	D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES 1. LATITUDE (deg., min., sec.) 37° 18' 15" N 2. LONGITUDE (deg., min., sec.) 77° 16' 21" W	
E. ARE THERE BUILDINGS ON THE SITE? <input type="checkbox"/> 1. NO <input checked="" type="checkbox"/> 2. YES (specify): Office and manufacturing facilities		

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

A. TRANSPORTER	B. STORER	C. TREATER	D. DISPOSER
1. RAIL	1. PILE	1. FILTRATION	1. LANDFILL
2. SHIP	2. SURFACE IMPOUNDMENT	2. INCINERATION	2. LANDFARM
3. BARGE	3. DRUMS	3. VOLUME REDUCTION	3. OPEN DUMP
4. TRUCK	4. TANK, ABOVE GROUND	4. RECYCLING/RECOVERY	4. SURFACE IMPOUNDMENT
5. PIPELINE	5. TANK, BELOW GROUND	5. CHEM./PHYS. TREATMENT	5. MIDNIGHT DUMPING
6. OTHER (specify):	6. OTHER (specify):	6. BIOLOGICAL TREATMENT	6. INCINERATION
		7. WASTE OIL REPROCESSING	7. UNDERGROUND INJECTION
		8. SOLVENT RECOVERY	8. OTHER (specify):
		9. OTHER (specify):	filled in residue ponds

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

Dredge spoils from James River deposited on 1 to 2 acre field in 1973. Liquid from phenol residue ponds pumped to POTW Plant. Solid material left in place and ponds were filled in.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☒ 2. LIQUID ☒ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☒ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7. REACTIVE ☐ 8. INERT ☐ 9. FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

VA State Files, RCRA Listing

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
(1) PAINT, PIGMENTS	(1) OILY WASTES	(1) HALOGENATED SOLVENTS	(1) ACIDS	(1) FLYASH	(1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGENATED SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	Decontamination water used during dismantling of Kepone Processing Plant.
			(7) PHENOLS	* 88,000 cubic feet of residual dirt left in place at residue ponds (phenol residue).	
			(8) HALOGENS		
			(9) PCB		
			(10) METALS	30,000 cubic yards of river sediment contaminated with 0.8 ppm kepone	
			(11) OTHER (specify):		

V. WASTE RELATED INFORMATION (continued)

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3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

Dredge spoils from James River contaminated with 0.8 ppm. kepone. Residual dirt left in place at phenol residue ponds. Decontamination water from dismantling of Kepone Processing Plant pumped to fly ash field.

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE:

Reportedly, no waste disposal occurring on facility property at present time.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER	X			Depth to groundwater in shallow water, ranging between 2 & 5 feet.
8. CONTAMINATION OF SURFACE WATER	X			Discolored ponded water discharge to Gravelly Run, which drains into James River.
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS		X	3/21/84	Foul order noted near ponded water on east side of access road.
13. CONTAMINATION OF SOIL		X	1978	Sediment dredged from James River, Contaminated with 0.8 ppm. kepone.
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

Health Dept. Permit #241 issued
for construction of kepone cell.

- ☒ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☒ 3. STATE PERMIT (specify):
☐ 4. AIR PERMITS ☒ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER
☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☒ 10. OTHER (specify): Corps of Engineers Permit #25DOXZ1000985 issued on 11/7/72 for deposition
of dredge spoils.

- ☒ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): See Above

VIII. PAST REGULATORY ACTIONS

- ☐ A. NONE ☒ B. YES (summarize below)

The Semi Works Plant, a kepone processing plant, was ordered closed and demolished in 1977 by the EPA, Virginia Department of Health and the Virginia State Water Control Board. As part of a consent decree, Allied constructed a clay lined cell to dispose of the demolished plant.

IX. INSPECTION ACTIVITY (past or on-going)

- ☐ A. NONE ☒ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
RCRA Inspectors	on-going	State	Routine inspection performed by VASWCB and VA State Air Control Board.
Preliminary Assessment	1/28/82	EPA	EPA Region III contractor performed on site visual inspection.

X. REMEDIAL ACTIVITY (past or on-going)

- ☐ A. NONE ☒ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Closing and dismantling of Kepone Processing Plant	1978	EPA/STATE	Kepone manufacturing operations demolished and buried on site under EPA and state directions.

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

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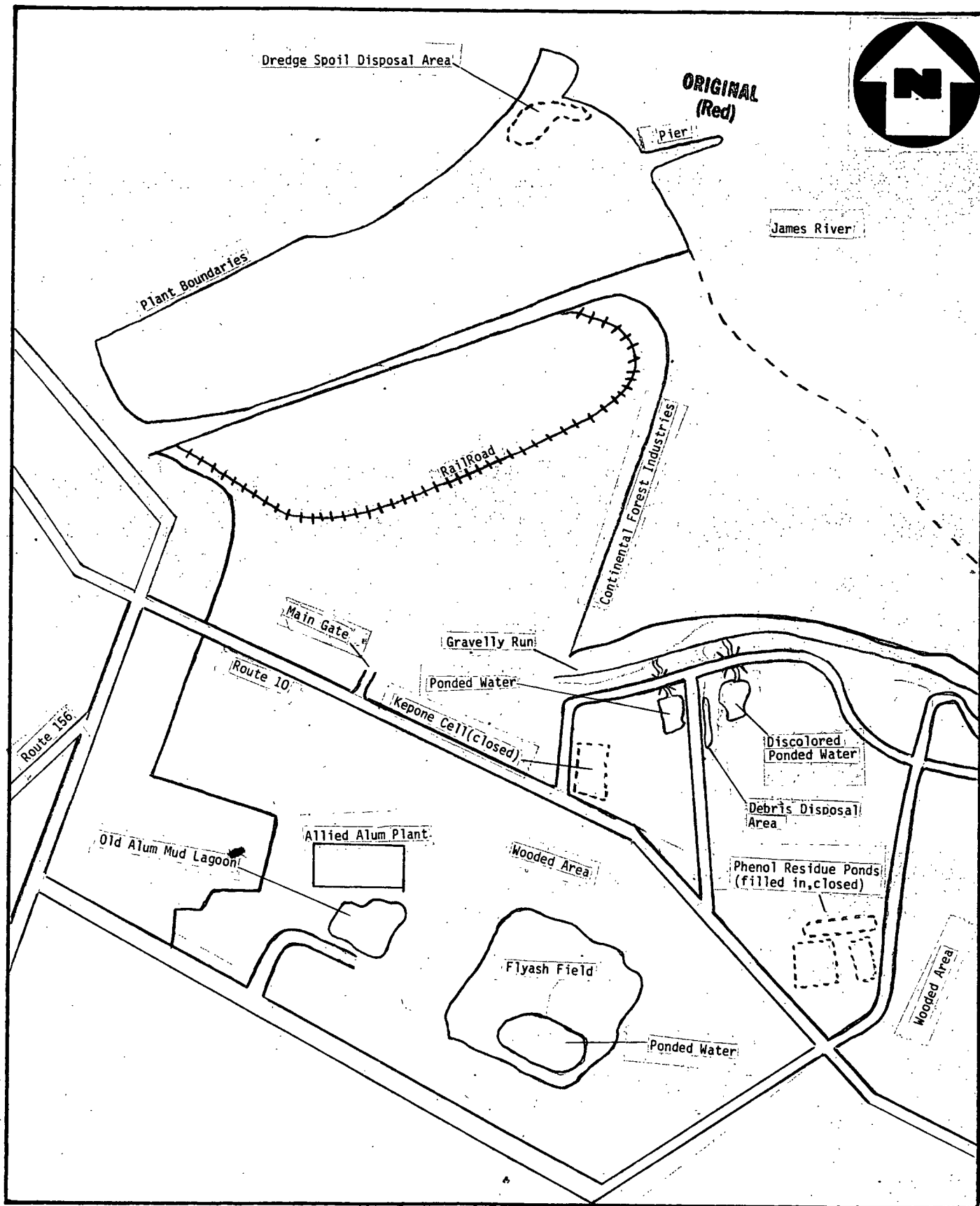
ATTACHMENT 1

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1. COST CENTER:	REM/FIT ZONE CONTRACT TECHNICAL DIRECTIVE DOCUMENT (TDD)			2. NO. : F3-8402-21
ACCOUNT NO.:				
3. PRIORITY: <input checked="" type="checkbox"/> HIGH <input type="checkbox"/> MEDIUM <input type="checkbox"/> LOW	4. ESTIMATE OF TECHNICAL HOURS: 60	5. EPA SITE ID: VA-40	6. COMPLETION DATE: 5/15/84	7. REFERENCE INFO.: <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> ATTACHED <input type="checkbox"/> PICK UP
8. GENERAL TASK DESCRIPTION: <u>Conduct a Preliminary Assessment.</u>				
9. SPECIFIC ELEMENTS: 1.) <u>Obtain from state or local authorities relevant information pertaining to hazardous substances or materials.</u> 2.) <u>Conduct a brief on and off site inspection.</u> 3.) <u>Prepare report including proposed sampling plan if applicable.</u>				
10. INTERIM DEADLINES:				
11. DESIRED REPORT FORM: FORMAL REPORT <input checked="" type="checkbox"/> LETTER REPORT <input type="checkbox"/> FORMAL BRIEFING <input type="checkbox"/>				
OTHER (SPECIFY):				
12. COMMENTS: <u>CONTACT BOB WICHNER OF Va. DEPT. OF HEALTH</u>				
13. AUTHORIZING RPO: <u>Harold G. Byr</u> (SIGNATURE)				14. DATE: <u>3/15/84</u>
15. RECEIVED BY: <u>[Signature]</u> (CONTRACTOR RPM SIGNATURE) <input checked="" type="checkbox"/> ACCEPTED <input type="checkbox"/> ACCEPTED WITH EXCEPTIONS <input type="checkbox"/> REJECTED				16. DATE: <u>3/15/84</u>

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ATTACHMENT 2



Site Sketch - Allied Chemical Co.

Hopewell, Virginia

Not to Scale



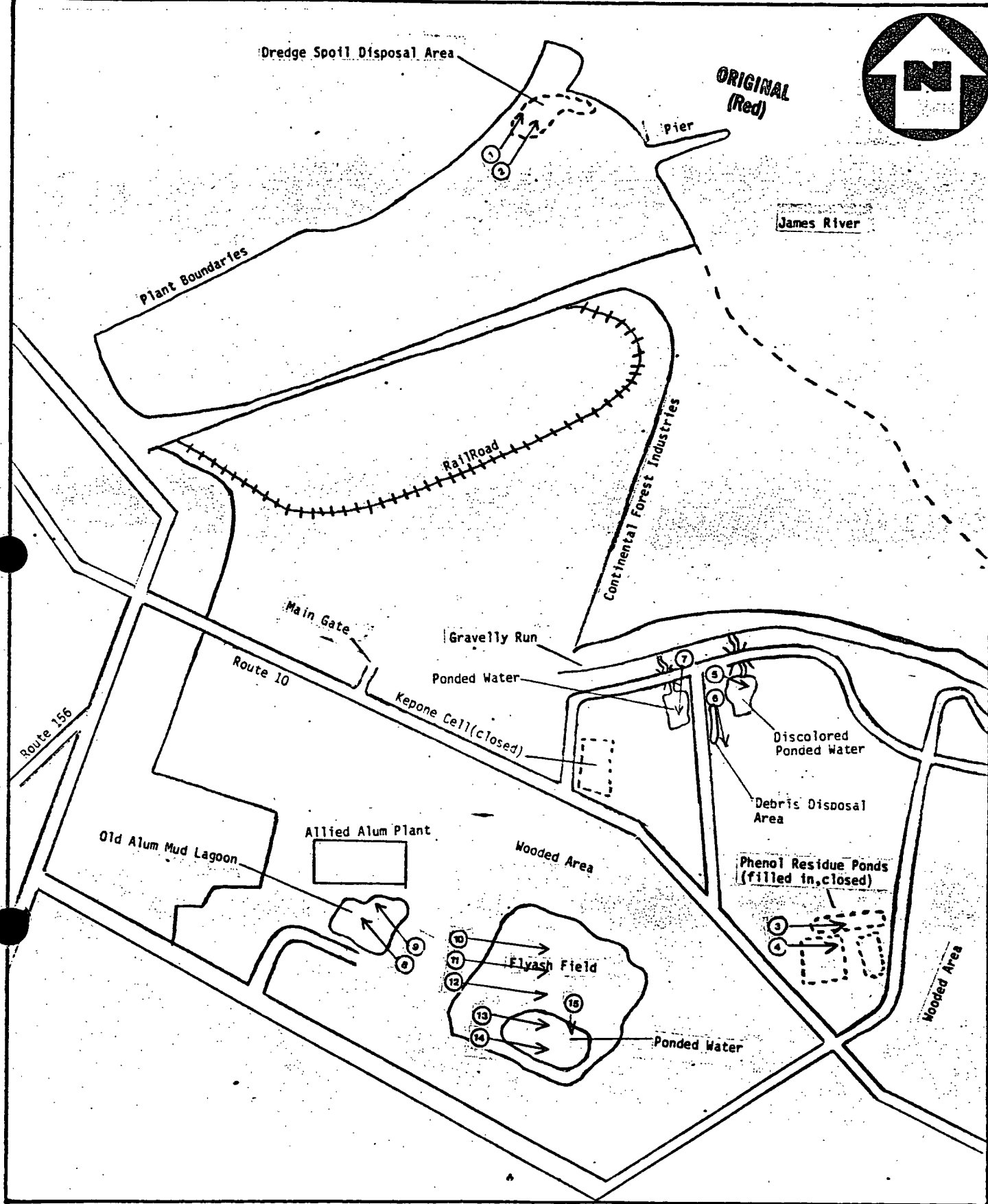


Photo Location Map - Allied Chemical Co.

Hopewell, Virginia

Not to Scale

